

DMITRIYEV, K.

NAZDATNIY, Semen Mikheylovich; DMITRIYEV, K., spetsredaktor; TUROVSKIY, B.,
redaktor; ZAVADSKIY, B., tekhnicheskiy redaktor

[For gas distribution engineers] Stroiteliu o gazosnabzhenii.
Kiev, Gos. izd-vo lit-ry po stroit. i arkhitekt. USSR, 1957. 157 p.
(Gas distribution) (MIRA 10:7)

BROUN, K.; DMITRIYEV, K.; YEVTYUKHOV, K.; VOLKOV, Yu., starshiy nauchnyy
sotrudnik

Discussing the article "Methods of drawing-up industrial safety rules
and their contents." Okh. truda i sots. strakh. no.6:47-54 Je '59.
(MIRA 12:10)

1. Starshiy inzhener po tekhnike bezopasnosti ordena Trudovogo Krasnogo
Znameni tresta "Tuzhuraltyazhstroy" Orenburgskogo sovnarkhoza, g. Orenburg
(for Broun). 2. Tekhnicheskiy inspektor stantsii Sinarskaya Yuzhno-
Ural'skoy zheleznoy dorogi (for Dmitriyev). 3. Zamestitel' nachal'nika
Spetsinspektsii Gosgortekhnadzora RSFSR (for Yevtyukhov). 4. Vsesoyuznyy
nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'-
nogo soveta profsoyuzov, Leningrad (for Volkov).
(Industrial safety)

DMITRIYEV, K. (Tashkent)

Models are speeding. Za rul. 17 no.7:13 J1 '59.
(MIRA 13:1)

(Uzbekistan--Automobiles--Models)

CHERNOV, A.; ARKHANGEL'SKIY, Yu.; GIMEYN, S., inzh (Moskva); KHAYKIN, V.;
DASKOVSKIY, V.; DMITRIYEV, K.; YUDIN, G.; SHASHNIN, Yu.

Technological information. Okhr. truda i sots. strakh. 6
no.5:36-42 My '63. (MIRA 16:8)

1. Laboratoriya tekhniki bezopasnosti Gosudarstvennogo vsesoyuznogo
nauchno-issledovatel'skogo tekhnologicheskogo instituta remonta i
ekspluatatsii mashinno-traktornogo parka (for Gimeyn).
(Technological innovations)

DMITRIYEV, K. A., INZH.

UKRAINSKIY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT SOORUZHENIY

MONTAZH SANITARNO-TEKHNICHESKIKH SISTEM V ZDANIYAKH IZ SHLAKOBETONNYKH BLOKOV. PAGE 45

SO: SBORNIK ANNOTATSIY NAUCHNO-ISSLEDOVATEL'SKIKH RABOT PO STROITEL'STVU, MOSCOW, 1951

DMITRIYEV, K. G.

ca

Application of interrupted spark for quantitative spectral analysis of metals in solutions. K. G. DMITRIYEV, *Zashch. skaya. Lab.* 13, 61-5(1949). An interrupted spark (50 breaks per min.) between 2 C electrodes the upper one being pointed, the lower one ground flat, and spaced by 4 mm. is fed with a filter paper impregnated by the test soln., which is pressed against the lower electrode and removed after each spark interruption. The app. is used for detg. Mg in the presence of Cu and Ni with the sample dissolved in 2.5 N HNO₃. The soln. was evaporated and diltd. with water. Usually 20-60 interruptions are sufficient for satisfactory exposure, with the 2852.4 Å line used for Mg. The app. was also used successfully for detg. Al, Fe, Mn, Mg, and Cu in natural waters. G. M. Kozolupov

6

SHCHERBINA, A. K., MASTERO, I. A., IMETRINEV, K. I. and STEPENKO, H. F.

"Antibiotics against experimental pasteurellosis in poultry."

Veterinariya, Vol. 37, No. 2, 1960, p. 40

(SHCHERBINA, A. K., Prof., MASTERO, I. A., and IMETRINEV, Dotsents, STEPENKO, H. F.,
Ordinator - Ukrainian Acad. Agricultural Sci.

DMITRIYEV, K. I., SHCHERBINA, A. K., GORBAN', N. I. and NASTENKO, K. A.
(Candidates of Veterinary Sciences and Doctor of Veterinary Sciences)

"The Testing of biomyacin in pasteurellosis of ducklings"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 81-89

DMITRIYEV, K. I. - Cand. Vet. Sci.

DMITRIYEV, K. YE.

28(1)

PHASE I BOOK EXPLOITATION

SOV/2087

Elementy sistem avtomaticheskogo regulirovaniya. ch. 1:
Chuvstvitel'nyye usilitel'nyye i ispolnitel'nyye elementy
(Elements of Automatic Control Systems. pt. 1: Sensing,
Amplifying and Control Elements). Moscow, Mashgiz, 1959. 722 p.
(Series: Osnovy avtomaticheskogo regulirovaniya, t 2) Errata
slip inserted. 13,000 copies printed.

Reviewers: F. F. Galteyev, Candidate of Technical Sciences,
V. A. Karesev, Doctor of Technical Sciences, P. P. Klobukov,
Candidate of Technical Sciences, V. V. Petrov, Candidate of
Technical Sciences, Yu. D. Ragozin, Candidate of Technical Sciences,
Yu. R. Reyngol'd, Engineer, B. A. Ryabov, Doctor of Technical
Sciences, B.D. Sadovskiy, Candidate of Technical Sciences,
A. G. Saybel', Candidate of Technical Sciences, and A. A. Shevyakov,
Candidate of Technical Sciences; Scientific Eds.: I. M. Vitenberg,
Candidate of Technical Sciences, A. I. Moldaver, Candidate of
Technical Sciences, and Yu. Ye. Ruzskiy, Candidate of Technical
Sciences; Ed. of Series: V. V. Solodovnikov, Doctor of Techni-
cal Sciences, Professor; Eds. of Publishing House: G. F. Polyakov,
A. G. Akimova, and G. M. Konovalov; Tech. Eds.: A. Ya. Tikhonov

Card 1/13

Elements of Automatic Control Systems (Cont.)

SOV/2087

and T. F. Sokolova; Managing Ed. for Literature on Machine Building and Instrument Construction (Mashgiz): N. V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for engineering and scientific personnel and for instructors of vtuzes concerned with problems of automatic control.

COVERAGE: The authors explain the principle of operation of automatic control elements and servomechanisms. They also discuss typical automatic control circuits and present equations of motion and static and dynamic characteristics of automatic control elements. They describe sensing elements, amplifiers, control elements and transducers. The book contains Sections I, II, and III of Part 1, Volume II, "Principles of Automatic Control." The following persons participated in writing the present work: D. A. Braslavskiy, Candidate of Technical Sciences, paragraph 4 of Chapter III and paragraphs 1-8 and 14 of Chapter IV; L. S. Gol'dfarb, Doctor of Technical Sciences, paragraphs 1, 2, 6 and 7 of Chapter I; A. I. Guzenko, Candidate of Technical

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Elements of Automatic Control Systems (Cont.)

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Sciences, paragraph 1 of Chapter VIII; K. Ye. Dmitriyev, Candidate of Technical Sciences, paragraph 2 of Chapter XIII; V. A. Kalashnikov, Engineer, Chapter XIV; P. P. Klobukov, Candidate of Technical Sciences, paragraphs 2 and 3 of Chapter VIII; P. F. Klubnikin, Candidate of Technical Sciences, Chapter XII; I. M. Krassov, Candidate of Technical Sciences, paragraph 1 of Chapter XIII, and Chapter XIV; D. S. Pel'por, Doctor of Technical Sciences, paragraphs 1-3 of Chapter III; V. V. Petrov, Candidate of Technical Sciences, paragraph 1 of Chapter XIII, and Chapter XIV; M. A. Rozenblat, Doctor of Technical Sciences, Chapter VII; Yu. Ye. Ruzskiy, Candidate of Technical Sciences, paragraphs 1, 3-5 and 8-10 of Chapter 1, paragraphs 2-5, 12, 13 and 17 of Chapter II, paragraph 3 of Chapter XIII, and Chapter IX; B. D. Sadoyskiy, Candidate of Technical Sciences, paragraphs 1 and 2 of Chapter X; A. A. Sokolov, Candidate of Technical Sciences, Chapter VI; V. K. Titov, Candidate of Technical Sciences, paragraphs 9-13 of Chapter IV, paragraph 4 of Chapter X, and Chapter XI; G. M. Ulanov, Candidate of Technical Sciences, paragraph 1 of Chapter II; Ye. V. Filipchuk, Candidate of Technical Sciences, paragraphs 6-11, 14-16 and 18-29 of Chapter II;

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Elements of Automatic Control Systems (Cont.)

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A. Ye. Kharybin, Candidate of Technical Sciences, Chapter V; and
V. A. Khokhlov, Candidate of Technical Sciences, paragraph 1 of
Chapter IX and paragraph 1 of Chapter XIII. References appear at
the end of each chapter.

TABLE OF CONTENTS:

Introduction

1

SECTION I. SENSING ELEMENTS· TRANSDUCERS,
MODULATORS AND DEMODULATORS

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Ch. I. Sensing Elements for Measuring Electrical Quantities	6
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2. Electronic sensing elements	17
3. Permanent-magnet moving-coil sensing elements	22
4. Electrodynamic sensing elements	24
5. Electromechanical transducer	32
6. Electromagnetic sensing elements	32
7. Induction sensing elements	

Card 4/13

DMITRIEV, K. Z., ILKOVSAYA, Z. G. and FODOLESKAYA, M. Z.

"Magnesium ammonium phosphate in vegetation Tests", Trans. Sci. Inst. Fertilizers, No. 113, pp 44-9, 1933.

Pot expts. with flax on a podzolic soil and oats on a pegraded chernozem show that $Mg NH_4$ phosphate is a very favorable source of N and P. The Mg apparently improved the quality of the flax. $MgHPO_4$ proved to be a better fertilizer than ammoniated $MgHPO_4$. The flax, as a rule, does not tolerate high quantities of N. The oats responded to the N in the fertilizer. $Mg NH_4$ phosphate was superior to pptd. phosphate for mustard and peas. but not for buckwheat. It is suggested that for oily plants, such as flax and mustard, the Mg in this new fertilizer is highly effective.

J. S. Joffe.

YURGENSON, Yu., inzh.; DMITRIYEV, L., inzh.

No such case is possible with us. Okhr.truda i sots.strakh.
3 no.4:66-67 Ap '60. (MIRA 13:6)
(Construction industry—Safety measures)

BUGOV, A.U., inzh.; KLIMENCHENKO, T.V., inzh.; DMITRIYEV, L.A., inzh.

Expedient design of annular connecting flanges for hydraulic
turnine rotors and standardization of their calculation.
Energomashinostroenie 9 no.5:6-10 My '63. (MIRA 16:7)

(Hydraulic turbines) (Flanges)

DMITRIYEV, L.B.

The acoustic nature of some physiological adaptations of the vocal apparatus during singing. Probl.fiziol.akust. 3:34-44 '55.
(MIRA 9:5)

1. Gosudarstvennyy muzykal'no-pedagogicheskiy institut imeni Gnesinykh, Moskva.
(MUSIC--PHYSIOLOGY) (VOICE)

DMITRIYEV, L. B.

"Radiological Investigation of the Structure and of the Adaption of the Vocal Apparatus of Singers."

dissertation defended for the degree of Candidate of ^{Medical} ~~Biological~~ Sciences at the Inst. for Physiology im I. P. Pavlov.

Defense of Dissertation (Jan-Jul 1957)
Sect. of Biological Sciences
Vest. AN SSSR, 1957, v. 27, No. 12, pp. 118-120

KL 20-57 86

S/121/63/000/002/002/010
D040/D112

AUTHORS: Dmitriyev, L.B., and Lisitsyn, N.M.

TITLE: Investigation of a magnetostrictive microfeed drive

PERIODICAL: Stanki i instrument, no.2, 1963, 5-9

TEXT: The magnetostrictive behavior of K65 (K65) alloy rod, 35 mm in diameter, has been studied in an experimental unit especially designed by the Moskovskiy stanko-instrumental'nyy institut (Moscow Institute of Machine Tools and Instruments) and built at the "Krasnyy proletariy" Plant. It is fitted with an optical head with 0.0001 mm divisions. The purpose of the studies was to provide data for designers of magnetostrictive drives for precision machine tools, such as used in the British "Cincinnati No.2" centerless grinder and some other machines. The observations of the rod behavior are described in detail and practical recommendations are given. K65 alloy has a relative elongation of $86 \cdot 10^{-6}$ even without special heat treatment, and has been found a suitable material for the drive rods. It is recommended (1) to use a magnetic circuit permitting almost total magnetic saturation at low currents in the magnetizing coils; (2) to use current of not more than 0.5 amp/mm² density in order to prevent elongation through heating; (3) to use heat-removing

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S/121/63/000/002/002/010
D040/D112

Investigation of a magnetostrictive microfeed drive

arrangements if stronger current is used; and (4) to fix the rod ends extremely rigidly. The screening effect of eddy currents in the rod prevents high drive speeds during operation in the zone corresponding to the linear sections of the static characteristics. Additional studies are needed to establish the proper design of cooling arrangements. Development of standard drive designs for different types of precision machine tools is recommended. There are 8 figures. ✓

Card 2/2

ACC NR: AP5024955 EWA(c) JD/HW/DJ SOURCE CODE: UR/0286/65/000/016/0015/0016

AUTHORS: Antonov, A. V.; Tselikov, A. I.; Dmitriyev, L. D.; Potapov, N. N.

ORG: none

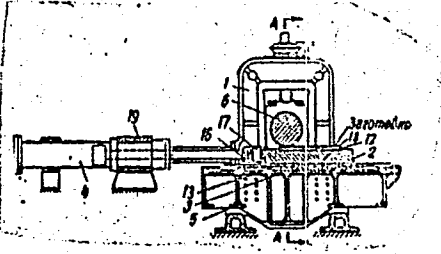
TITLE: Machine for rolling of finned sheets on a press. Class 7, No. 173690
 announced by All-Union Scientific Research and Construction Institute of Metallurgical Machine Construction (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut metallurgicheskogo mashinostroyeniya)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 15-16

TOPIC TAGS: metal rolling, metal working, metal sheet

ABSTRACT: This Author Certificate presents a machine for rolling of finned sheets on a press, including an undriven roll and a hydraulically driven moving plate (see Fig. 1).

Fig. 1. [Abstractor's note: no nomenclature given.]



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L 8131-66

ACC NR: AP5024955

To decrease the hydraulic force requirements, the plate is supported by a linear roller bearing and on the sides is guided by gear racks meshing with gears connected to the ends of one of the rollers of the roller bearing. A second version has provisions for rotating the roll during its heating prior to rolling. Orig. art. has: 1 figure. 2

SUB CODE: IE/ SUBM DATE: 29Jan63

nw
Card 2/2

AM4035369

BOOK EXPLOITATION

S/

Dmitriyev, Leonid Georgiyevich; Sosis, Petr Moiseyevich

Programming in the design of spatial structures (Programmirovaniye raschetā prostranstvennykh konstruktsey), Kiev, Gosstroyizdat USSR, 1963, 225 p. illus., biblio. 4,000 copies printed. (At head of title: Zonal'nyy nauchno-issledovatel'skiy i proyektnyy institut tipovogo i eksperimental'nogo proyektirovaniya zhilykh i obshchestvennykh zdaniy Goskomiteta po grazhdanskomu stroitel'stvu i arkhitekture pri Gosstroye SSSR).

TOPIC TAGS: civil engineering, spatial structure, construction, electronic computer, ALGOL-60, algorithm, linear equation, computer programming, structural mechanics

PURPOSE AND COVERAGE: The book gives numerical methods of calculating buildings using modern digital machines (electric and electronic). Great attention is given to analysis of the algorithmic languages, problems of creating machine algorithms, and the technology of programming. Application of economic organization of the memory of electronic computers based on a study of the features of the matrix structure that are characteristic for problems of structural mechanics and applied elasticity theory are proposed. The algorithmic language ALGOL-60 is used to develop a number of programs for systems of linear equations of certain structures and the

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general programs of calculating spatial systems in a nonlinear position are given. The book is intended for engineers, designers, researchers, and students in civil engineering. The general part of the book relating to problems of programming, solution of linear equations of structural mechanics, etc. can be used by specialists in ship building, aviation and machine building industries.

TABLE OF CONTENTS [abridged]:

Foreword -- 3

Ch. I. New approach to calculation based on the development of computer technology and programming -- 5

Ch. II. Solution of systems of linear equations of structural mechanics on electronic computers -- 75

Ch. III. Languages used in programming -- 16

Ch. IV. Spatial structures -- 94

Ch. V. Derivation of basic equations -- 119

Ch. VI. Calculating spatial systems in nonlinear positions -- 141

Ch. VII. General programs -- 150

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Ch. IX. Optimal programs for calculating structures -- 191

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AM1035369

Ch. X. Translation of programs from the ALGOL-60 language to the computer
language -- 212
Bibliography -- 223

SUB CODE: MA, DP

SUBMITTED: 02Dec63

NR REF SOV: 073

OTHER: OOL

DATE ACQ: 16Apr64

Card 3/3

ACCESSION NR: AT4039354

S/3093/64/000/005/0024/0049

AUTHOR: Dmitriyev, L. B. (Engineer)

TITLE: Magnetostriction methods for achieving small linear displacements

SOURCE: Moscow. Stankoinstrumental'nyy institut. Kafedra "Metallorazhishchiye stanki." Issledovaniya v oblasti metallorazhishchikh stankov, no. 5, 1964, 24-49

TOPIC TAGS: magnetostriction, machine tool, metal cutting, lathe, automatic lathe, micro-feed, ferromagnetism, cobalt, nickel, iron, permalloy, ultrasonic milling, magnetostriction motor

ABSTRACT: The article begins with a consideration of the physical essentials of the phenomenon of magnetostriction, in which it is shown that magnetostriction is one of the characteristics of the ferromagnetic behavior of matter. The "domain theory", proposed by Weiss in 1907, is explained in terms of its applicability to magnetostriction. Elongation properties of cobalt, nickel, iron and permalloy-45 are analyzed and the values of magnetostriction saturation and certain physical characteristics of the most widely used magnetostriction materials are discussed. In a section dealing with the industrial application of magnetostriction, the author notes the advantages of magnetostriction converters as compared with other sources of ultrasonic oscillations (gas-stream, thermal, piezoelectric, and

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others). The use of magnetostriction in ultrasonic metal machining is mentioned and examples are given showing the advantageous aspects of this technique. Magnetostriction delay lines are discussed, the author noting the development by the Bendix Corporation of a system, employing such delay lines, for the control of the Dynapas milling machine which provides for relatively small power consumption by the electronic equipment of the entire control system. The point is made that at the present time, in many machines, very small linear displacements ("microfeeds", less than 0.01 mm) are used, the achievement of which involves the overcoming of considerable difficulties caused, in the main, by the unstable dynamic characteristics of the drive system. The magnetostriction method of microfeed permits a considerable improvement in the dynamic properties of the drive system. Since it possesses extremely high rigidity, the magnetostriction motor ensures highly-accurate and in principle, unlimitedly small linear displacements. It is noted that the difficulties in effecting such microfeeds are occasioned by the fact that, under given conditions, the movement of the carriage or other element of the feed mechanism having a sliding couple as a final component is not smooth in nature, but tends to "skip", while in the majority of cases the magnitude of the "skip" or "jump" can neither be accurately determined nor predicted in advance with sufficient exactitude. The modern interpretation of the nature of this phenomenon is analyzed, on the basis of the simplifying assumption that the sliding pair has only one

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degree of freedom. The author shows that insufficient rigidity of the drive system limits the operational speed of the system and renders it unstable. Drive mechanisms with a high degree of reduction, possessing a rather great degree of flexibility, are unable to provide the extremely small displacements necessary, for example, in precision tools and in automatic regulatory devices. As a result of the variation in time of both the rigidity of the system and the conditions of friction on the guide elements, it is impossible accurately to predict in advance either the magnitude of the "jump" of the performing element or the operational speed of the system. Moreover, the accuracy of drive mechanisms having large reduction is limited by virtue of the magnitude of the jump, which in certain cases is unacceptable. Consequently, the author concludes, the instability in the magnitude of the jumps and speed of operation of mechanisms with a high degree of reduction renders these devices unreliable for work requiring an accuracy of displacement on the order of tenths of a micron. What is required for such micro-displacements is a high-speed mechanism with high rigidity and stable accuracy, which permits the variation of the feed magnitude. The following chapter of the article deals with existing mechanisms for microfeed and a brief description of the basic characteristics. In this section the author demonstrates that none of the mechanisms known at the present time (mechanical, hydraulic, hydromechanical, elasto-mechanical and thermodynamic) satisfy all the requirements already discussed in the paper. A separate section of the article is devoted to a description and discussion of an

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industrial magnetostriction drive model (motor) developed by the Airborne Instruments Laboratory, Inc. of the United States and called the "Inchworm." The use of an "Inchworm"-type motor on the Cincinnati No. 2 centerless grinding machine is the subject of a further chapter, after which the author takes up the discussion of the use of magnetostriction micro-feed drive in Soviet machine tools. This method, he tells us, was first used in the Soviet Union for obtaining small displacements on an experimental model of a coordinate-boring machine (model 2A54OP) for the accurate positioning of the table and carriages. Details of the design of the magnetostrictor are given and the operation of the entire combined device (tool and magnetostriction drive) is described. Somewhat later a magnetostrictor was used with diamond-cutting and centerless grinding machines. This use was preceded by investigatory work to study the parameters of the magnetostriction motor, carried out at the SKB-3 (Odessa). The results of the experiments conducted at this office are summarized in the article. The paper concludes with a few remarks concerning the use of magnetostriction drive mechanisms with several other machine tools (the MK-12 and OS-216 diamond-boring machines and the L54-S2 centerless grinding machine). Orig. art. has: 5 formulas, 7 tables and 16 figures.

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ACCESSION NR: AT4039354

ASSOCIATION: Moskovskiy stankoinstrumental'nyy institut (Moscow Machine Tool Institute)

SUBMITTED: 00

DATE ACQ: 04Jun64

ENCL: 00

SUB CODE: IE, MM

NO REF SOV: 020

OTHER: 002

Card 5/5

DMITRIYEV, L.

Why there is no ample supply of dinners. #inomekhanik, No 3, 1952.

DMITRIYEV, L.G., inzhener.

Acoustic method of locating cable damage. Energetik 1 no.2:6-8 J1 '53.
(MLRA 6:8)
(Electric cables--Testing)

GERSHUN, L.Z.; ABRAMOV, A.G.; DMITRIYEV, L.G.

Using an exciter to start a generator used as a synchronous compensator.
Energ. biul. no.8:26-27 Ag '53. (MLRA 6:8)
(Dynamos)

GERSHUN, L.Z., inzhener; ABRAMOV, A.G., inzhener; ~~DMITRIYEV~~, L.G., inzhener.

Starting a generator in the capacity of a synchronous compensator with
the aid of an exciter. Energetik 2 no.5:15-17 My '54. (MLRA 7:6)
(Dynamos)

DMITRIYEV, L.B.

Designing magnetic circuit for a low-feed magnetostrictive drive.
Stan. i inst. 34 no.12:6-9 D '63.

(MIRA 17:11)

DMITRIYEV, L.I.

Interaction of somatic and vegetative conditioned and unconditioned responses in the catatonic, stuporous form of schizophrenia. Trudy Inst.vys. nerv. deiat. Ser. patofiziol. 5:21-37 '58 (MIRA 11:12)
(SCHIZOPHRENIA)
(REFLEXES)

DMITRIYEV, L.I.

Investigations on impaired coordination of the cortical signal
systems in the catatonic, stuporous form of schizophrenia.
Trudy Inst.vys. nerv.deiat. Ser.patofiziol. 5:38-54 '58(MIRA 11:12)
(SCHIZOPHRENIA)
(CONDITIONED RESPONSE)

KRASIL'SHCHIK, B.Ya.; VERBLOVSKIY, A.M.; Prinimali uchaatiye: BELKIN, L.A.;
DMITRIYEV, L.I.; STOLYAROV, I.M.

Automatization of feeding pulverized coal in slag treatment by
the fuming process. TSvet. met. 33 no.6:31-36 Je '60.

(MIRA 14:4)

(Zinc—Metallurgy)

(Automatic control)

ACC NR: AT6036411

(N)

SOURCE CODE: UR/2536/66/000/006/0021/0032

AUTHOR: Vishnyakov, D. Ya. (Doctor of technical sciences; Professor); Sovalova, A. A. (Candidate of technical sciences); Paisov, A. I. Candidate of technical sciences); Dmitriyev, L. I. (Engineer)

ORG: none

TITLE: The effect of the rate of rolling from the homogenizing temperature on the structure and properties of KhN77TYuR (EI437B) alloy

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy, no. 66, 1966, Struktura i svoystva aviatsionnykh staley i splavov (Structure and properties of aircraft steels and alloys), 21-32

TOPIC TAGS: nickel chromium aluminum alloy, titanium containing alloy, boron containing alloy, alloy homogenization, cooling rate effect, alloy structure, alloy property/KhN77TYuR alloy

ABSTRACT: The structure and properties of KhN77TYuR(EI4337C) nickel-base alloy, homogenized at 1080C for 8 hr, cooled at different rates (in water, oil, air or in furnace) and then aged at 750C for 16 hr, have been investigated. Tests at room temperature showed that specimens cooled at a rate of 500 °/min (oil quenched) had the highest strength and ductility: tensile strength 96.0 kg/mm², yield strength 69.8 kg/mm², elongation of 18.8%, reduction of area 22.5%. The notch toughness also

Cord 1/2

UDC: 669.017:669.15'24

ACC NR: AT6036411

increased with the increasing cooling rate from 2 kg·m/cm² in specimens cooled at a rate of 1 °/min to 6 kg·m/cm² in water-quenched specimens. The highest rupture strength was observed in specimens cooled at a moderate rate of 20 °/min. Specimens cooled at a higher or at a lower rate had lower heat resistance. Air cooling (140 °/min) causes decomposition of γ-solid solution and the precipitation of the Ni (Ti Al) strengthening phase at 780C. At lower cooling rates the decomposition of solid solution begins at a higher temperature (900C at 1 °/min rate). The particle size of the strengthening phase decreases with increasing cooling rate: 1200—2500 Å at 1 °/min and less than 500 Å at 20 °/min. The microstructure of the alloy with a maximum rupture strength is characterized by a uniform distribution of the strengthening phase particles (300—500 Å) within grains of γ-solid solution, an accumulation of chromium carbides, primarily at grain boundaries, and by the presence of layers of solid solution free of the strengthening phase along the grain boundaries, which prevent failures at small amounts of deformation. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 005/ ATD PRESS: 5107

Card 2/2

ACC NR:	AT7002854	(N)	SOURCE CODE:	UR/3239/66/000/003/0061/0069
AUTHOR:	Golubchenko, A. I.; Dmitriyev, L. I.; Lobov, I. V.; Shreytul', A. Yu.			
ORG:	none			
TITLE:	Investigations of the effect of a marine gas turbined foreward arrangement on combustion chamber characteristics.			
SOURCE:	Nikolayev. Korablestroitel'nyy institut. Sudostroyeniye i mor'skiye sooruzheniya, no. 3, 1966. Sudovyye energeticheskiye ustanovki (Ship power equipment), 61-69			
TOPIC TAGS:	gas turbine, gas turbine engine, marine engine, turbine design, combustion chamber, combustion chamber temperature, <i>flow characteristics</i>			
ABSTRACT:	The effect of foreward-arrangement design on the combustion chamber characteristics of marine gas turbines has been investigated on four types of annular combustion chambers burning T-1 GOST 4138-49 kerosene or GOST 4749-49 diesel oil. Flow aerodynamics in the combustion chamber, combustion completeness, gas-outlet temperature field, combustion-chamber resistance, and the limits of a steady combustion are discussed in detail and individual design features are graphically			
Cord	1/2			

ACC NR: AT7002854

represented. As demonstrated, axial-velocity distribution in the combustion chamber, combustion completeness relative to the excess-air ratio, mean exhaust-gas temperature, and the combustion chamber's wall temperature and resistance are significantly influenced by the particular design of the combustion chamber's forward arrangement. Generally, the combustion-chamber opening factor ϕ , which is the relationship of all of its apertures to its middle section primarily affects the resistance (increased ϕ decreases resistance, and vice versa); increased recycling improves the combustion conditions, and the use of an airflow whirling device to direct a vortex against the flame-tube walls improves the temperature field of the flame-tube walls and behind the combustion chamber. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 7, 13, 20 / SUBM DATE: none / ORIG REF: 005

Card 2/2

DMITRIYEV, L.K.

AUTHOR: Dmitriyev, L.K.

136-2-7/22

TITLE; Ways of Raising the Efficiency of a Type GK-30 Electro-filter, Removing Dust from Roasting Gases. (Puti povysheniya effektivnosti elektrofilitra GK-30, ochishchayushchego ot pyli obzhigovyye gazy)

PERIODICAL: Tsvetnyye Metally, 1957, No.2, pp. 36 - 43 (USSR)

ABSTRACT: The type GK-30 electro-static filter commissioned at the roasting plant of the Ufaleyskiy Nickel Works was found to have a low efficiency (90% retention of nickel dust). The causes of this are discussed and research work by a team (directed by N.N. Yeliseyev) from the Gintsvetmet Institute outlined. The filter is a horizontal one and consists of two sections in each of which three successive electric fields are produced. Among the measures tested was single unit half-wave rectification of the current feeding two filter units resulting in a 40 000 Rouble annual saving of electricity. A section of the article deals with this system and a diagrammatic representation is given. Another measure investigated and adopted was automatic shaking of electrodes, and this raised the daily catch of dust by 75.8 kg, the dust content being 0.212 g/m³ compared with 0.341 g/m³ with semi-automatic shaking. Circuit diagrams of the automatic system are given and its

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Ways of Raising the Efficiency of a Type Γ K-30 Electro-filter,
Removing Dust from Roasting Gases. 136-2-7/22

operation is described in detail. A description and circuit diagram are also given of an automatic system of successive switching on and lowering of voltage, which was advantageously adopted. All the above measures caused the ore-section efficiency to rise from 90-93 to 97-97.5%; with both sections working the efficiency is 98%. There are 3 figures.

2/2 ASSOCIATION: Ufaley Nickel Works. (Ufaleyskiy Nikelevyy Zavod)

AVAILABLE: Library of Congress

SUBJECT: *Dmitriyev, L.M.*
USSR/Geology 5-2-10/35

AUTHOR: Dmitriyev, L.M.

TITLE: On the Geological Structure of the Ufaley Intrusion Region in the Middle Urals (O geologicheskoy stroenii rayona Ufaleyskoy intruzii Srednego Urala)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskoy, 1957, #2, pp 133-136 (USSR)

ABSTRACT: The author denies the existence of the Ufaley granite massif which is shown in the geological maps of the Urals.

There are 3 complexes of rocks composing this region:

1. The lower metamorphosed complex which is composed of the 4 layers (from bottom upward): quartzites, biotite and amphibole gneisses, quartzites and quartz-muscovite shales, and amphibole gneisses;
2. The upper metamorphosed complex which is composed of
a) amphibole gneisses, quartzites and micaceous-garnet shales, and b) quartzites;
3. Green rock layers which are composed of various green shales.

Card 1/2

5-2-10/35

TITLE: On the Geological Structure of the Ufaley Intrusion Region in the Middle Urals (O geologicheskoy stroenii rayona Ufaleyskoy intruzii Srednego Urala)

The author concludes that in this region there is a junction of folded formations: ancient, whose direction is NW, and recent ones, whose direction is NNE.

The article contains 3 geologic maps.

No references are cited.

ASSOCIATION: Not indicated.

PRESENTED BY:

SUBMITTED: No date indicated.

AVAILABLE: At the Library of Congress.

Card 2/2

DMITRIYEV, L.M. inzh.

Car-weighing apparatus to be used in automated classification
hump yards. Zhel. dor. transp. 41 no.5:68-71 My '59.
(Weighing machines) (Railroads--Hump yards) (MIRA 12:7)

KAPUSTIN, A.P.; DMITRIYEV, L.M.

Effect of ultrasound on the domain structure of liquid crystals.
Kristallografiia 7 no.2:332-334 Mr-Apr '62. (MIRA 15:4)

1. Institut kristallografii AN SSSR.
(Liquid crystals) (Ultrasonic waves)

DMITRIYEV, L.N.

BABAYEV, A.R.; DMITRIYEV, L.N.

Use of spiral-welded pipe in building local gas pipelines. Gas.
prom. no.2:35-36 # 157. (NLRA 10:3)
(Gas pipes)

DMITRIYEV, L.N.

Automatic line for setting radio parts on printed plates.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekhn.
inform. 16 no.11:40-42 '63. (MIRA 16:11)

DMITRIYEV, Lev Nikolayevich; MIKHEYEV, Ye.N., red.

[Grid production methods in the manufacture of printed circuits] Metod setkografii v proizvodstve pechatnykh skhem. Leningrad, 1964. 20 p. (Leningradskii dom nauchno-tekhnikeskoi propagandy. Obmen peredovym opytom. Seriya: Pribory elementy avtomatiki, no.6)

(MIRA 17:7)

DMITRIYEV, Lev Nikolayevich; SHERSTOBOYEV, A.A., red.

[Group method for manufacturing printed circuits and
the resolving capability of diagramatic silk nets]
Gruppovoi metod izgotovleniia pechatnykh skhem i raz-
reshaiushchaia sposobnost' shelkograficheskikh setok.
Leningrad, 1965. 30 p. (MIRA 18:5)

DMITRIYEV, L.N.; US, O.D., red.

[New equipment for the preliminary processing of molded polymeric materials; review of foreign patents on the basic branches of the industry] Novoe oborudovanie dlia predvaritel'noi obrabotki formuemykh polimernykh materialov; obzor inostrannykh patentov po osnovnym otrasliam promyshlennosti. Moskva, TSentr. nauchno-issl. inst. patentnoi informatsii i tekhniko-ekon. issledovaniy, 1963. 34 p. (NIRA 18:6)

EVROPIN, G.P., (Moscow); DMITRIYEV, L.S. (Moscow).

Inspection in the teaching of physics. Fiz. v shkole 13 no.4:25-31 J1-Ag
'53. (MLRA 6:6)

(School management and organization)

DMITRIYEV, L.S. (Moscow); YEVROPIN, G.P.(Moscow); SHCHERBAKOV, N.A.(Moscow)

~~SECRETARY OF THE PARTY, 1954-1955~~

Lesson planning for the 8th to 10th classes. Fiz. v shkole 14 no.4:
66-72 J1-Ag '54. (MLRA 7:7)

(Physics--Study and teaching)

DMITRIYEV, L.S.(Moscow); YEVROPIN, G.P.(Moscow); SHCHERBAKOV, N.A.
(Moscow)

Lecture outline for the 8th, 9th, and 10th classes. Fiz. v
shkole 14 no.6:70-78 N-D '54. (MLRA 7:12)
(Physics--Study and teaching)

PEREL', Yu.G.; POPOV, P.I.; MARTYNOV, D.Ya.; KUNITSKIY, R.V.;
VORONTSOV-VEL'YAMINOV, B.A.; BAZYKIN, V.V.; KULIKOV, K.A.;
SHISTOVSKIY, K.N.; TSVETOV, R.I.; BRONSHTEN, V.A.; DAGAYEV, M.M.;
MOGILKO, A.D.; SEMAKIN, N.K.; DMITRIYEV, L.S.; IZOTOV, A.A.

Mihail Evgen'evich Nabokov; obituray. Buil.VAGO no.28:60-62
'60. (MIRA 14:6)

(Nabokov, Mikhail Evgen'evich, 1887-1960

BAZYKIN, V.V.; BRONSHTEIN, V.A.; VORONTSOV-VEL'YAMINOV, B.A.; DAGAYEV, M.M.;
DMITRIYEV, L.S.; IZOTOV, A.A.; KULIKOV, K.A.; KUNITSKIY, R.V.;
MARTYNOV, D.Ya.; MINCHENKOV, Ye.Ya.; MOGILKO, A.D.; PECEL', Yu.G.;
POPOV, P.I.; REZNIKOV, L.I.; SVETLOV, R.I.; SEMAKIN, N.K.;
SHISTOVSKIY, K.N.

Mikhail Evgen'evich Nabokov; obituary. Fiz. v shkole 20 no.3:110-
111 My-Je '60. (MIRA 13:11)

(Nabokov, Mikhail Evgen'evich, 1887-1960)

DMITRIYEV, L. V.

Chemical characteristics of crystallization of granites of the chief intrusive phase of the Khib massif. L. V. Dmitriyev (V. I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. U.S.S.R., Moscow). *Geokhimiya* 1956, No. 3, 50-64.—The Khib intrusion, which is multiphase material, was studied. It was shown that the following rocks enter into its comp.: (1) granitoids of the intrusive phase, (2) granites of the subsidiary intrusive phase, and (3) rocks of the vein phase. Microscopic studies of polished sections of the rocks were made. Data from chem. and spectral analyses of these rocks were compared with the microscopic data. The microstructure of the rocks was studied in detail. The order of crystn. of the minerals differed from Rosenbusch's scheme. First to app. are basic plagioclases, quartz, and soda orthoclases. Microcline, nonferrous minerals, quartz, albite, and accessory minerals segregated later.

Gladys S. Macy

21
10
The problem of the distribution of titanium in granites. L. V. Dmitriyev and E. B. Znamenskiy (V. I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. U.S.S.R., Moscow). *Geokhimiya* 1956, No. 4, 48 p. Abstract was made to det. the main concentrator of TiO₂ in the granites of Central Kazakhstan. Since it is known that biotites can contain variable amts. of TiO₂, biotites in these granites were examined. Of the total TiO₂ content in the rock 65% was found in the biotite of porphyritic granites, 86% in the biotite of medium-grained granites, and 80% in the biotite from highly porphyritic granites. Thus, biotite is the chief bearer of TiO₂ in these granites. It can be assumed that Ti enters into the biotite lattice. The mineralogical compn. of the granites is provided. G. S. Macy

KOPIEV-DVORNIKOV, V.S.; POLKVOY, O.S.; MARKOVA, N.G.; DMITIRYEV, L.V.;
YEFREMOVA, S.V.; YEZHOV, A.I.; ZHUKOV, M.A.; KOZLOV, A.V.; LEBEDEV,
A.P.; otv.red.; SHLEPOV, V.K., red.izd-va; ASTAF'YEVA, G.A., tekhn.red.

[Paleozoic intrusive complexes in Bet-Pak-Dala. Part 1] Paleozoiskie
intruzivnye komplekсы Betpakdala. Part.1. Moskva, Izd-vo Akad.nauk
SSSR, 1960. 239 p. (Akademiia nauk SSSR. Institut geologii rudnykh
mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no.44)
(MIRA 13:12)

(Bet-Pak-Dala--Granite)

DMITRIYEV, I.V.

Petrochemical characteristics of differentiation and hybridism in the intrusive phase of the Kaibskiy granite massif. Geokhimiia no. 3:215-228 '61. (MIRA 14:4)

I. V.I. Vernadsky Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences, U.S.S.R., Moscow.
(Kazakhstan --- Granite)

DMITRIYEV, L.V.; KOTINA, R.P.; MOISEYEVA, R.P.

Changes of the biotite composition and conditions governing its stability in granitoids of different petrochemical types as revealed by the study of biotites of the Kaibskiy massif (central Kazakhstan). Geokhimiia no.3:220-235 '62. (MIRA 15:4)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences U.S.S.R., Moscow.
(Kazakhstan--Biotite)

DMITRIYEV, L.V.; LEONOVA, L.L.

Uranium and thorium in granitoids of the Kaibakiy massif
(central Kazakhstan). Geokhimiia no.8:665-672 '62.
(MIRA 15:9)

1. Vernadskiy Institute of Geochemistry and Analytical
Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Kazakhstan--Uranium) (Kazakhstan--Thorium)

DMITRIYEV, L.M.

Prospecting for sulfide-nickel deposits in the Tagil-Magnitogorsk
synclitorium of the Ural Mountain region. Razved. i okh. nedr 29
no.11:9-14 N '63. (MIRA 17:12)

1. Ural'skaya kompleksnaya tematicheskaya ekspeditsiya.

DMITRIYEV, I.V.; KOTINA, R.P.; YAROSHEVSKIY, A.A.

Character of the evolution of a magmatic system in a field of
gradients of intensive parameters. Geokhimiia no.4:390-405
Ap '65. (MIRA 18:7)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo
AN SSSR, Moskva.

L 39734-65 EWT(m)/LPP(c)/EPJ/EWP(t)/EWP(b) PR-4/PS-4 IJP(c)/RPL JD/WW/
 ACCESSION NR: AP5006777 J S/0195/65/006/001/0121/0127 27
 26
 B

AUTHOR: Dmitrenko, L. M.; Lachinov, S. S.; Silyakova, R. F.

TITLE: The effect of cathode and anode polarization on the activity of a catalyst for synthesizing ammonia. II

SOURCE: Kinetika i kataliz, v. 6, no. 1, 1965, 121-127

TOPIC TAGS: cathode polarization, anode polarization, catalyst, ammonia //

ABSTRACT: It was found that during the initial moments of polarization the yield of ammonia increases in the case of cathode polarization and decreases in anode polarization. The more active the catalyst, the less is the initial effect of cathode polarization and the greater is the initial effect of anode polarization. During prolonged cathode polarization the catalyst is deactivated; with prolonged anode polarization the catalyst is activated. The accelerating effect of additives on the iron catalyst for ammonia synthesis is explained by acceleration of the acceptor stages in the electro-chemical mechanism of ammonia catalysis. It is assumed that one of the conditions for catalytic acceleration is a reduction in the concentration of chemisorbed intermediate compounds which deactivate the surface of

Cont 1/2

L 39734-65

ACCESSION NR: AP5006777

the catalyst. Orig. art. has: 4 figures, 1 table.

ASSOCIATION: Gosudarstvennyy institut azotnoy promyshlennosti (State Institute of the Nitrogen Industry)

SUBMITTED: 04Jun68

ENCL: 00

SUB CODE: GC, IC

NO REF SOV: 004

OTHER: 000

ML
Card 2/2

GORBATOV, I. S.; DEKRETY, H.

Building Materials

Replacing asbestos-slate insulation in
asbestos-cement slabs with mineral wool
felt. Biul. stroi. tekhn. 9, No. 8,
April 1952. Inzh. Minmashstroy

SO: Monthly List of Russian Accessions, Library of Congress, August 1952 ~~1953~~, Uncl.

~~DMITRIYEV, M.~~
DMITRIYEV, M.

New design for bins. Stroitel' no.3:21 Mr '58.
(Hoisting machinery)

(MIRA 11:2)

~~DMITRIYEV, M.~~ nauchnyy sotrudnik

Fertilizers obtained from the air. IUn.tekh. 3 no.5:18-21
My '59. (MIRA 12:7)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(Nitrates)

Dmitriyev, M.

USSR / Chemical Technology. Chemical Products and Their Application. Food Industry.

I-30

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, No 10398

Author : Dmitriyev, M.

Inst : Not given

Title : The Production of High-Quality Cheese in the Winter

Orig Pub : Moloch. prom-st, 1956, No 1, 43

Abstract : A technical process for the production of cheese in the winter season is described. The following conditions are recommended for the cellar-storage of the cheese: brine temperature $\geq 12^{\circ}$; temperature of the air during the first month, $14-15^{\circ}$, after which the cheese is moved to a cellar in which the temperature is maintained at $12-13^{\circ}$; in order to hasten crust formation, the cheese is wetted every 5 days. Prior to paraffin coating, the cheese is wetted and soaked for 1-2 min in a weak lime solution at 70°

Card : 1/1

DMITRIYEV, M.

Device for making wedges. Stroitel' no.5:15 My '61.
(MIRA 14:6)

(Carpentry--Tools)

DMITRIYEV, M.

At the alarm signal.... Veon.znan. 37 no.4:34-35 Ap '61.
(MIRA 14:4)
(Air defenses)

DMITRIYEV, M., kand.khimicheskikh nauk

The peaceful "profession" of the atom. *IUn.tekh.* 6 no.2:7-12
'62. (MIRA 15:2)
(Radioactivity--Juvenile literature)

DMITRIYEV, M., kand.khimicheskikh nauk

Energy of nuclear radiations and chemistry. Izv.tekh. 6 no.11:
24-28 N '61. (MIRA 14:11)
(Radiation)

DMITRIYEV, M.

[Heat engineering and heat engineering equipment in plants producing building materials] Teplotekhnika i teplotekhnicheskoe oborudovanie zavodov promyshlennosti stroitel'nykh materialov; uchebnoe posobie dlia uchashchikhsia-zaochnikov. Moskva, Pt.4. 1963. 68 p.

(MIRA 17:6)

1. Vsesoyuznyy zaochnyy stroitel'nyy tekhnikum.

MAKAROV, P.G.; DMITRIYEV, M.A., professor, zaveduyushchiy.

Case of application of retrobulbar injection of novocaine and of therapeutic sleep in iridocyclitis. Vest.oft. 32 no.2:32-33 Mr-Ap '53. (MLRA 6:5)

1. Kafedra glaznykh bolezney Krasnoyarskogo meditsinskogo instituta.
(Eye--Diseases) (Novocaine) (Sleep)

SOKOL'SKIY, G.A.; DMITRIYEV, M.A.

Fluoromethyl esters of sulfuric acid. Part 5: Reaction of
fluoromethyl ethers with sulfuric anhydride. Zhur.ob.khim.
31 no.8:2743-2748 Ag '61. (MIRA 14:8)
(Ether) (Sulfur trioxide)

5.4500, 21.1320,
24.6820

77221
SOV/89-8-1-15/29

AUTHORS: Dmitriyev, M. D., Pshezhetskiy, S. Ya.

TITLE: Reactions of Nitrogen Dissolved in Water Induced by
Ionizing Radiations. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 1, pp 59-62 (USSR)

ABSTRACT: This communication contains some representative data
about reactions of nitrogen with water and products of
its radiolysis which the authors collected for the
purpose of comparison with known data about the similar
reaction of nitrogen with oxygen. These processes are
important in nuclear engineering, and the authors were
able on the bases of experimental data to investigate
their probable mechanism. The theoretical findings will
be the subject of the next communication. In the present
experimental work Co^{60} γ -rays and fast electrons were
used to oxidize the dissolved nitrogen into nitrate and
nitrite and produce ammonia. 0.2 mev electrons were
coming from an accelerator through a 15 μ thick aluminum

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to the Editor

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foil and 1.5 cm of air and entering the container through an additional 10μ aluminum membrane. This membrane adhered closely to the liquid to prevent reactions with a possible gaseous phase. The absorbed electron energy was determined by means of a distilled water calorimeter comparing it to a constant current heater. The calorimeter sensitivity was $2 \cdot 10^{-2}$ degrees/min.watt. Gamma rays originated from 1.4 and 20 kcurie Co^{60} sources. Exposures were performed in glass or stainless steel ampules. Gases were dissolved under pressure into bidistillates. During exposure the ion concentration was determined measuring electrical conductivity. After exposure the calorimetric determination of ions utilized the following reactions: disulphophenol acid and ammonia for the nitrate ion; α -naphthylamine and sulphanil acid for nitrite ion; mercuripotassium iodide in alkaline solution for the ammonia ion, reacting into mercuriammonium iodide. The lowest limit of these methods was

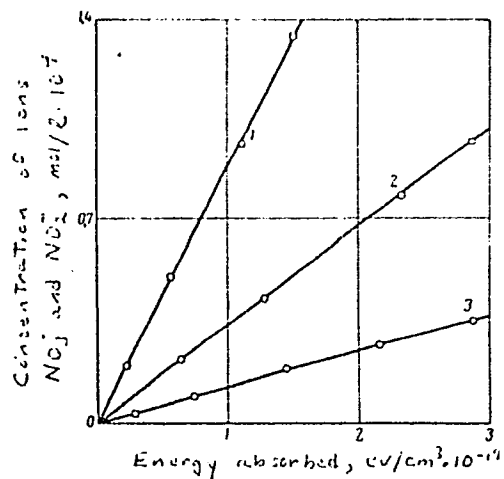
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approximately 10^{-3} mgm. Figure 1 shows the relationship between the nitrate and nitrite yield and the absorbed radiation energy at different gas pressures.

Fig. 1. Nitrate and nitrite concentration vs. absorption of radiation energy. Air pressure (in atmospheres): (1) 100; (2) 20; (3) 1.

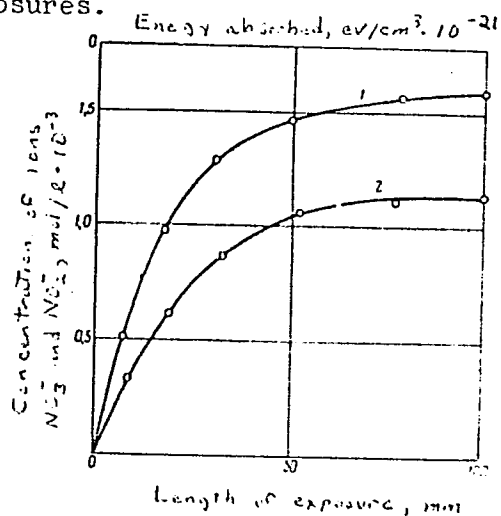


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Reactions of Nitrogen Dissolved in Water Induced 77221
by Ionizing Radiations. Letter to the Editor SOV/89-8-1-15/29

The amount of bound nitrogen is proportional to the absorbed radiation energy up to 10^{19} or 10^{20} ev/cm^3 . At higher values of absorbed energy the proportionality fails as seen on Fig. 2 which represents data from fast electron exposures.

Fig. 2. Nitrate and nitrite ion concentration vs. exposure time to electrons of 200 kev (gas pressure 1 atm): (1) nitrogen; (2) air.



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If during the experiment one supplies gas to the solution, the speed of the reaction remains constant, as seen in Table 1.

Table 1. Reaction speed versus length of exposure.
(1 atm of air pressure over the solution, intensity
of radiation $1.8 \cdot 10^{17}$ ev/cm³·sec)

Length of exposure h	Nitrate and Nitrite concentration 10 ⁻¹⁷ mol/cm ³	Reaction speed 10 ⁻¹⁴ mol/ cm ³ ·sec	Speed constant of the first order 10 ⁻⁴ sec ⁻¹
0,22	1,05	1,20	1,51
0,67	2,95	0,89	1,48
1,55	6,52	0,37	1,51
2,23	6,98	0,15	1,53
2,67	8,60	0,054	1,53
2,88	8,85	0,014	1,56

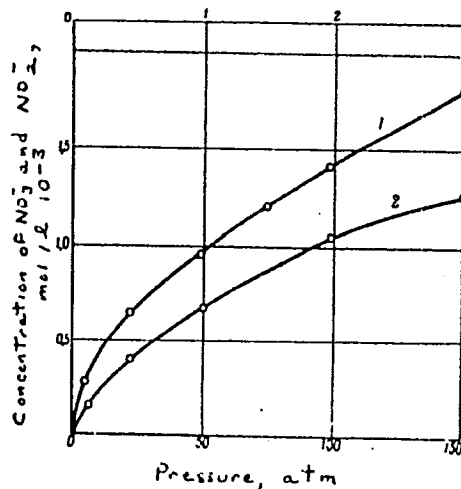
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Consequently the energy yield is constant. One also sees from Fig. 3 the relationship between the reaction speed and pressure.

Fig. 3. Nitrate and nitrite concentration produced by γ -rays, vs. gas pressure.
Radiation intensity $1.79 \cdot 10^{14}$ ev/sec. cm^3 , 50 hours of exposure: (1) nitrogen; (2) air.



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Table 2 gives the nitrite/nitrate ratio as function of absorbed energy, while Table 3 gives the ratio of ammonia to the sum of nitrate and nitrite.

Table 2. Nitrite to nitrate concentration ratio versus absorbed energy.

Absorbed energy, ev/cm ³	Nitrite to nitrate concentration ratio			
	Nitrogen, atm			Air, 1 atm
	1	2	50	
10 ¹⁸	3,3	2,7	1,5	0,7
10 ²⁰	1,8	1,5	0,9	0,4
10 ²²	0,5	0,4	0,3	0,1

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Table 3. Ratio of ammonia and combined nitrate and nitrite ion yields versus absorbed energy.

Absorbed energy, ev/cm ³	Relative yield of ammonia ions		
	Nitrogen, atm		Air, 1 atm
	1	100	
10 ¹⁸	1,6	1,2	1,3
10 ²⁰	1,1	0,9	0,8
10 ²²	0,9	0,8	0,3

Further yields measured by the authors are given in Table 4 and 5.

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Table 4. Relative yield of nitrite and ammonia from
nitrogen pressure (absorbed energy $2.2 \cdot 10^{19}$ ev/cm³).

Pressure, atm	[NO ₂ ⁻]/[NO ₃ ⁻]	[NH ₄ ⁺]/([NO ₂ ⁻]+[NO ₃ ⁻])
1	3,3	1,55
10	2,8	1,52
50	1,5	1,35
100	1,2	1,22

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Table 5. Energy yield of reactions of nitrogen
dissolved in water.

Pressure over the solution, atm	Composition of the gas, %	Nitrate yield, mol/100 ev	Nitrite yield, mol/100 ev	Ammonia yield, mol/100 ev	Yield of bound nitrogen, atoms/100 ev
1	100 N ₂	0,016	0,054	0,108	0,18
1	80 N ₂ +20 O ₂	0,032	0,021	0,085	0,14
1	50 N ₂ +50 O ₂	0,028	0,008	0,052	0,09
10	80 N ₂ +20 O ₂	0,068	0,057	0,205	0,33
50	100 N ₂	0,138	0,216	0,472	0,83
100	100 N ₂	0,238	0,283	0,730	1,25
150	80 N ₂ +20 O ₂	0,296	0,171	0,615	1,08
150	100 N ₂	0,267	0,342	0,700	1,37

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Reactions of Nitrogen Dissolved in Water
Induced by Ionizing Radiations. Letter
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There are 3 figures; 5 tables; and 9 references,
8 Soviet, 1 U.S. The U.S. reference is: J. Wright,
J. Linacre, W. Marsh, T. Bates, Conference on the
Peaceful Uses of Atomic Energy, Paper 445, Vol 7,
New York, 1956, p 560.

SUBMITTED: January 6, 1959

Card 11/11

AYERSHIN, S.G., prof., dokt.tekhn.nauk; ANAN'IN, G.P., dotsent, kand.tekhn.
 nauk; BARANOV, A.I., dotsent, inzh.; BERLIN, A.Ye., inzh.;
 BOCHKAREV, V.G., kand.tekhn.nauk; BUTKEVICH, R.V., kand.tekhn.nauk;
 VESELOVSKIY, V.S., prof., doktor tekhn.nauk; VESKOV, M.I., kand.
 tekhn.nauk; VOL'KENAU, A.V., kand.tekhn.nauk; GARKAVI, S.M.,
 kand.tekhn.nauk; GORBACHEV, T.F.; DAVIDYANTS, V.T., kand.tekhn.nauk;
 DMITRIYEV, M.F., kand.tekhn.nauk; DOBROVOL'SKIY, V.V., kand.tekhn.nauk;
 DUKALOV, M.F., kand.tekhn.nauk; ZAYTSEV, N.A.; ZARANKIN, P.S., inzh.;
 ZVIYAGIN, P.Z., dotsent, kand.tekhn.nauk; IL'SHTEYN, A.M., kand.tekhn.
 nauk; KILYACHKOV, A.P., dotsent, kand.tekhn.nauk; KIRICHENKO, I.P.,
 inzh.; KRUPENNIKOV, G.A., kand.tekhn.nauk; KUZNETSOV, S.T., kand.
 tekhn.nauk; KUCHERSKIY, L.V., kand.tekhn.nauk; LINDENAU, N.I., inzh.;
 LIPKOVICH, dotsent, kand.tekhn.nauk; LOKSHIN, B.S., kand.tekhn.nauk;
 MURATOV, M.L., dotsent, kand.tekhn.nauk; MUCHNIK, V.S., prof.,
 doktor tekhn.nauk; NAYDYSH, A.M., dotsent, kand.tekhn.nauk; NEKRA-
 SOVSKIY, Ya.E., prof., doktor tekhn.nauk; NIKHAYEV, G.A., inzh.;
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 PORTNOV, A.A., inzh.; PROSKURIN, V.V., dotsent, kand.tekhn.nauk;
 RUDEEV, B.A., inzh.; SAPITSKIY, K.F., kand.tekhn.nauk; SELETSKIY, R.A.,
 dotsent, kand.tekhn.nauk; SEMENOV, A.P., kand.tekhn.nauk; SKAPA,
 P.V., inzh.; SONIN, S.D., prof.; SUDOPLATOV, A.P., prof., doktor
 tekhn.nauk; TIMOSHEVICH, V.A., inzh.; FURMAN, A.A., inzh.; CHINAKAL,
 N.A.; SHAKHMEYSTER, L.G., dotsent, kand.tekhn.nauk; TERPIGOREV, A.M.,
 glavnyy red.; LOZNEVA, A.A., red.; NAUMKIN, I.F., red.; OSTROVSKIY,
 S.B., red.; PANOV, A.D., red.; STUGAREV, A.S., red.; SHELKOV, A.A.,
 (Continued on next card)

AYERSHIN, S.G.---(continued) Card 2.

red.; ARKHANGEL'SKIY, A.S., kand.tekhn.nauk, red.; REZNIKOV, G.A.,
inzh., red.; ALESHIN, M.I., red.izd-va; KACHALKINA, Z.I., red.
izd-va; PROZOROVSKAYA, V.I., tekhn.red.; NADEINSKAYA, A.A., tekhn.red.

[Mining; an encyclopedic handbook] Gornoe delo; entsiklopedicheski
spravochnik. Glav. red. A.M. Terpigorev. Chleny glav.red.: F.A.
Barabanov i dr. Vol.5 [Underground coal mining] Razrabotka
ugol'nykh mestorozhdenii podzemnym sposobom. Moskva, Gos. nauchno-
tekhn.izd-vo lit-ry po ugol'noi promyshl. 1958. 447 p.

(MIRA 12:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Gorbachev, Chinakal).
2. Chlen-korrespondent Akademii nauk USSR (for Zaytsev).
(Coal mines and mining)

S/169/62/000/011/014/077
D228/D307

AUTHORS: Dmitriyev, M.K., Flaks, Ya.Sh. and Golovin, A.P.

TITLE: Trial application of radiometric investigations for direct oil-field searches in Bashkiriya

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 59-60, abstract 11A357 (In collection: Yadern. geofiz. pri poiskakh polezn. iskopayemykh, M., Gostoptekhizdat, 1960, 206-219)

TEXT: The institut GIRGI AN SSSR (Institute GIRGI, AS USSR) and the Trest Bashneftegeofizika (Bashkir Petroleum Geophysics Trust) conducted joint investigations on the territory of the Bashkir ASSR in order to clarify the potentialities of radiometric methods in searches for oil and gas fields. Areal airborne gamma-ray surveying was carried out in areas with an unestablished oil content and also over known oil fields, on a scale of 1:100,000. This was followed by ground operation detailing: car and foot beta-gamma-ray surveying, mapping drilling, and soil-lithologic mapping with the

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selection of samples for laboratory research. The following complex of laboratory investigations was employed to analyze the rock and soil samples: 1) radiometric determination, 2) pH and humus determinations, 3) mechanical analysis, and 4) spectral analysis. It is mentioned that the zone, in which the gamma-activity of surface deposits inside the boundary of a pool is characteristically lowered and reaches 20-25% of the surrounding field's intensity, is outlined by a band of heightened gamma-field intensity values. These exceed the background values outside the anomaly by up to 10%. Thus, the overall effect of an anomaly increases up to 35% from the average background. However, variations in the intensity of the gamma-field, which are connected with the influence of different surface factors (lithology of the covering and indigenous deposits, topography, drainage, soil and plant cover), reach 35-50% of the measurable value and are a serious impediment. Therefore allowance was made in the interpretation for the effect of these factors on the radiometric field by comparing radiometric, geologic, topographic and structural maps in order to eliminate anomalies related to their influence. More than 70 zones of reduced gamma-activity, of which

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48 were subjected to further study, were revealed as a result of the work. It is concluded: 1) the distribution of anomalies over oil fields and in areas with an unestablished oil content is close, which confirms the similarity of the genesis of these anomalies; 2) of the total number of anomalies obtained over oil fields 89% pertains to anomalies, which cannot stem from the influence of surface factors or can be explained only partially. This circumstance indicates that effective interpretation of gamma-ray surveying data may be carried out subject to allowance being made for the influence of surface factors. Oil fields were revealed by subsequent drilling on several of the radiometric anomalies detected. On the basis of the results obtained it is concluded that the radiometric method of seeking oil fields is effective geologically, and it is recommended that the method should be included in the complex of geophysical investigations.

[Abstracter's note: Complete translation]

Card 3/3

EXCERPTA MEDICA Sec 9 Vol 13/3 Surgery Mar 59

DMITRIYEV, M. L.

1500. (430) TREATMENT OF LARGE TIBIAL DEFECTS IN CHILDREN (Russian text) - Dmitriev M. L. - ORTOP. TRAVM. I PROTEZ. 1957, 1 (28-30)
The author has modified Hennington's method and performs the operation in one stage. From the X-ray pictures the size of the necessary transplant of fibula is determined and corresponding markings on the skin are made. The transplant is taken subperiosteally via 2 skin incisions and is kept in place by the attached muscles. For transposition of the graft 2 other small incisions are made to suit the tibial defect; grooves are made in the ends of the tibial fragments into which the fibular transplant is inserted (the lower end first); the muscles of the anterior group are separated by blunt dissection. Some of the periosteum removed with the transplant is important for its survival. The periosteum remaining in situ after removal of the fibular fragment serves for regeneration of the latter. The advantages of this method are that a transplant of any size can be used without fear of its fracture or resolution, since a viable fragment of the fibula is taken including blood vessels and nerves. Case histories and radiographs are presented. (S)

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DMITRIYEV, M.L., prof.; PROKOPOVA, L.V.

Rare case of congenital intestinal pathology. Khirurgiia 34 no.9:
106-107 S '58. (MIRA 12:4)

1. Iz kafedry khirurgii detskogo vozrasta i detskoy ortopedii (zav. -
prof. M.L. Dmitriyev) Odesskogo meditsinskogo instituta imeni N.I.
Pirogova (dir. - prof. I.Ya. Dayneka).
(INTESTINES--ABNORMITIES AND DEFORMITIES)

DMITRIYEV, M.L., prof.: CHANG, A.I.

Resistance of the proliferation zone; experimental study. Ortop.travm.
(MIRA 13:3)
i protez. 20 no.6:75-78 Je '59.

1. Iz kafedry khirurgii detskogo vozrasta i detskoy ortopedii (zavedu-
yushchiy - prof. M.L. Dmitriyev) Odesskogo meditsinskogo instituta im.
N.I. Pirogova (direktor - zasluzhennyy deyatel' nauki USSR prof. I.Ya.
Deyneka).

(EPIPHYSIS, physiol.
eff. of metal nail on proliferation zone in
animals (Rus))

DMITRIYEV, M.L., prof. (Odessa, ul.Engel'sa, d.44,kv.5)

Treatment of acute hematogenous osteomyelitis in children. Nov. khir.
arkh. no.4:18-23 J1-Ag '60. (MIRA 15:2)

1. Kafedra khirurgii detskogo vozrasta i detskoy ortopedii (zav. -
prof. M.L.Dmitriyev) Odesskogo meditsinskogo instituta.
(OSTEOMYELITIS)

DMITRIYEV, M.L.

Use of osteosynthesis with a metal nail in children. Khirurgiia
(MIRA 15:5)
no.9:18-21 '61.

1. Iz kafedry khirurgii detskogo vozrasta s detskoy ortopediyey
(zav. - prof. M.L. Dmitriyev) Odesskogo meditsinskogo instituta
imeni N.I. Pirogova.
(INTERNAL FIXATION IN FRACTURES)

DMITRIYEV, M. L., prof. (Odessa, ul. Engel'sa, d. 44, kv. 5)

Treatment of chronic hematogenic osteomyelitis in children.
Nov. khir. arkh. no. 3:38-46 '62. (MIRA 15:4)

1. Kafedra detskoy khirurgii i detskoy ortopedii (zav. - prof.
M. L. Dmitriyev) Odesskogo meditsinskogo instituta.

(OSTEOMYELITIS)